

Appl. No. # 10/781,221
Amdt. dated 10/26/2004
Reply to OA of 9/14/2004

Amendments to the Specification:

CLAIMS

1. (amended) An Active Carbon Nanofiber-based battery comprising a cell trough filled with electrolyte with a cell cap, a spring coil locking onto said cell trough, an anode/cathode substrate plate installed within the cell trough linking with its respective separation membrane, and positive and negative terminals installed outside the cell cap connecting to said anode/cathode substrate plate respectively; whereas the anode substrate plate is composed of an aluminum plate and a Carbon Nanofiber layer spray-coated on the aluminum plate surface; whereas the cathode substrate plate is composed of a copper plate and a Carbon Nanofiber layer spray-coated on the copper plate surface, wherein gaps are formed between sets of substrate plates and their separation membranes, whereby the battery can have a large capacity with a capacitor-like functionality.
2. (original) The Active Carbon Nanofiber-based battery in claim 1, wherein the individual tube diameter of the Carbon Nanofiber layer is 20-80nm, with the length of 200-300nm.
3. (cancelled) The Active Carbon Nanofiber-based battery in claim 1, wherein each set of the substrate plate and its separation membrane has a gap in between, forming a capacitor-like functionality.
4. (original) The Active Carbon Nanofiber-based battery in claim 1, wherein the separation membrane is made by high-molecule, high-insulation cloth, with the size of the battery inner trough.
5. (new) The Active Carbon Nanofiber-based battery in claim 1, wherein individual tube diameter of the Carbon Nanofiber layer is 20nm, with the length of 290nm.
6. (new) The Active Carbon Nanofiber-based battery in claim 1, wherein individual tube diameter of the Carbon Nanofiber layer is 80nm, with the length of 300nm.
7. (new) The Active Carbon Nanofiber-based battery in claim 1, wherein individual tube diameter of the Carbon Nanofiber layer is 60nm, with the length of 200nm.
8. (new) The Active Carbon Nanofiber-based battery in claim 1, wherein capacitance ranges from 8 uf to 3000 uf.

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9. (new) The Active Carbon Nanofiber-based battery in claim 1, wherein battery capacity ranges from 150mAh to 200AH.